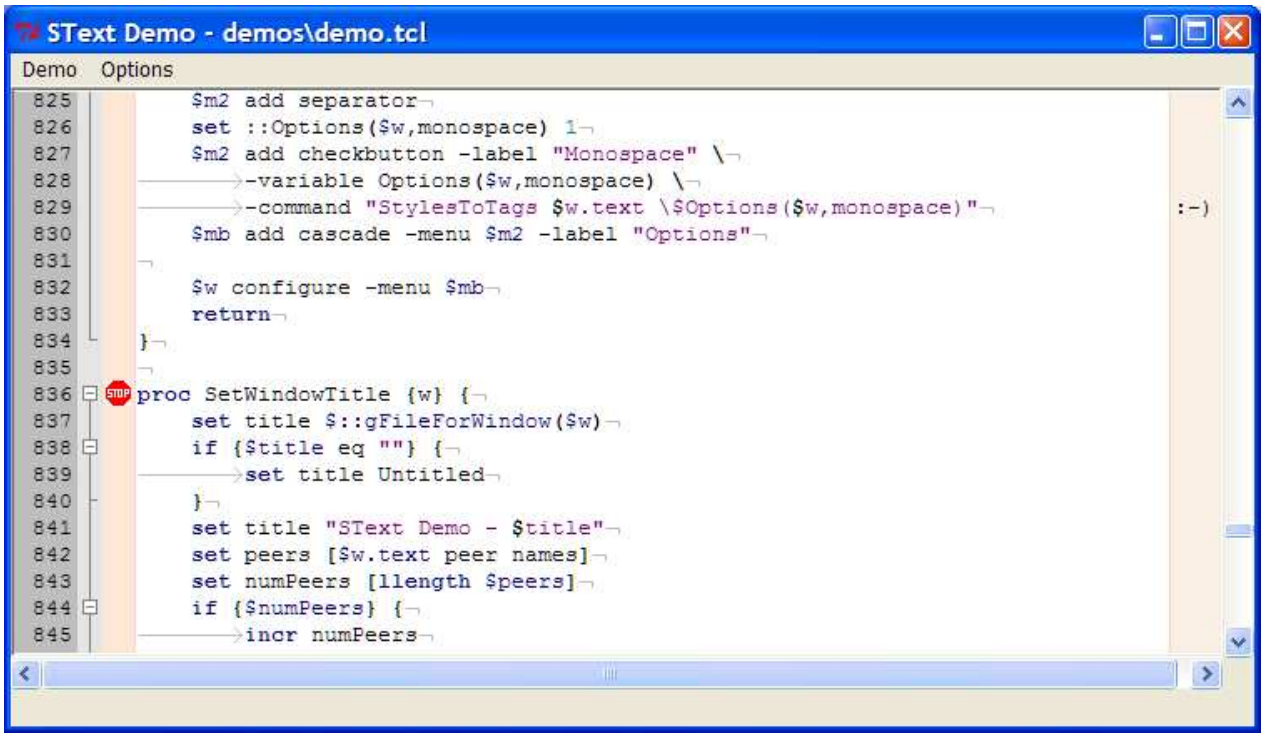
TkTextPlus

What is TkTextPlus?

TkTextPlus is an extended Tk Text widget with features suitable for source-code displaying and editing. Features include displaying line numbers, syntax highlighting, code folding and linemarkers.



Development Status

TkTextPlus is in the early stages of development. The underlying Tk 8.5 text widget itself still has some issues which make it not ready for daily use (issues with -startline and -endline). This webpage serves as the only (partial) documentation of the API, which is subject to change.

New Widget Options

-edgecolumn
-linenumbers
-showeol
-showtabs
-tabwidth
-whitespaceforeground

New Widget Commands

pathName identify x y
pathName linefoldable index
pathName linefolded index ?boolean?
pathName linefoldhighlight ?index?
pathName linefoldlevel index
pathName linevisible index ?boolean?
pathName togglecontraction index

Margins

A TkTextPlus widget can display up to 6 margins on the left and right sides of the window. One margin is for displaying line numbers, one for code-folding indicators, and the remaining 4 margins are for displaying linemarkers. The margins are predefined (you can’t create new ones) and are named number, fold, marker1, marker2, marker3 and marker4 respectively.
-activebackground
-activeforeground
-activeline
-background
-foreground
-justify
-leftedge
-padx
-rightedge
-side
-visible
-width
pathName margin cget name option
pathName margin configure name ?option? ?value? ?option value ...?
pathName margin names
pathName margin order ?list?

Line Markers

A linemarker is a graphical or textual annotation to a line. Each line of text may have up to 4 linemarkers associated with it, one in each of the 4 margins used for displaying linemarkers. A linemarker could be used to display an icon representing a debugger breakpoint in a source file for example.
-bitmap
-image
-text
pathName linemarker cget name option
pathName linemarker configure margin ?option? ?value? ?option value ...?
pathName linemarker create name ?option value ...?
pathName linemarker delete name
pathName linemarker names

pathName linemarker set line ?margin? ?name?

Lexers

A lexer is used to scan the text being displayed and allows language-specific syntax highlighting and folding. A lexer may for example identify comments, keywords, operators and strings and associate style information with the relevant pieces of text. The appearance of the different styles is controlled using the familar text widget tags, allowing you to specify the foreground and background colors, font etc of each style individually using the tag configure command.
Currently there are 6 lexers provided, named bash, cpp, lua, makefile, python and tcl. The lexing logic (and code ;-}) is based on the popular Scintilla editing component. It should be fairly easy to add new languages but there is no stable API for doing so.
Once a lexer is assigned to a text widget (using the lexer set command) the lexer will spring into action whenever text is inserted or deleted. The lexer invoke command is provided to test the performace of the lexer. On my machine for example lexer invoke takes ~54000 microseconds with the cpp lexer to parse all 9760 lines of tkTextDisp.c.
-bracestyle
-enable
pathName lexer bracematch index
pathName lexer cget name option
pathName lexer configure ?option? ?value? ?option value ...?
pathName lexer invoke ?start? end?
pathName lexer keywords index ?list?
pathName lexer names
pathName lexer set ?name?
pathName lexer styleat index
pathName lexer stylenames

Lexers & Tags

When a lexer is assigned with the lexer set command, one tag is created for each of the predefined lexer styles. The tag names are the same as the lexer style names as returned by the lexer stylenames command. Rather than applying tags using the tag add command, a lexer records a byte of style information with each byte of text. This method results in a considerable performance gain and memory savings over the tags being applied in the usual manner; it also limits the number of possible lexer styles to 255, but that shouldn’t be a concern.
You can still add any number of other tags using tag add. The tag names command will return the names of any tags including those created by a lexer. Furthermore, bindings on lexer tags will work. However, the tag ranges command will not return the names of tags a lexer itself has applied to the text.
Tags created by a lexer may not be deleted using tag delete; attempts to do so are silently ignored.

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